

LIVING BEINGS PROVE THE INCONSISTENCY OF SPECIAL RELATIVITY

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Abstract.-Relativistic observations of certain characteristics of living beings, such as their size or heart rate, are used here to construct a very simple argument that demonstrates the apparent, and therefore unreal, nature of the deformations of space and time deduced from special relativity.

Keywords: Special relativity, space contraction, time dilation, principles of special relativity.

1. Introduction

In many relativistic arguments, human observers appear who measure distances, ruler sizes, and clock rhythms, but these observers are not part of the arguments; only their measurements and observations are. In this short article, on the contrary, the observers themselves will be the protagonists of the argument, particularly their size and heart rate. Naturally, many other living beings could be considered in the same argument, as well as many other attributes related to space and time. Mass could also be included, but this will not be done because variations in mass with velocity have other non-relativistic explanations [8], [4], [1], [7], [5] [2, 3].

As will be seen in the following section, the theory of special relativity formally implies, among other things, that every living being has different actual sizes and different actual biological rhythms at the same time (as the reader will have observed from their multiple simultaneous and real metrics and their multiple and real simultaneous heart rates...). This naturally implies a violation of the fundamental laws of logic and biology: every living being is and is not, at the same time, identical to itself. An indisputable conclusion of a theory that has dominated physics for more than 120 years and does not admit significant discrepancies (!). The reader is free to judge this situation.

2. The observed observer

Although any arbitrarily large number of human observers and other living beings could be considered, the consequences would be the same as considering only one of them. Let, then, A_o be a human observer being at rest in his inertial reference frame RF_o . And let h_o , w_o and Δt_o be his height, width and heart rate, respectively. All these values are measured in RF_o and we will assume that they remain constant during a certain interval of the RF_o proper time.

Let us now consider an arbitrary number of different inertial reference frames $RF_{n,n=1,2,3...}$ from whose respective points of view the reference frame RF_o , and then the human being A_o , moves with different relative velocities $v_{n,n=1,2,3...}$ sufficiently high, for example greater than $0.2c$, where c is the speed of light. The observer A_o will be SIMULTANEOUSLY OBSERVED from these different inertial reference frames $RF_{n,n=1,2,3...}$, and from each of them, and according to the Lorentz transformation, his height, width, and heart rate will be simultaneously different from his proper values h_o , w_o , and Δt_o measured in his proper reference frame RF_o .

But no living being, including our observed observer A_o , can SIMULTANEOUSLY have different sizes and different heart rates (or other biological rhythms). Consequently, it must be concluded that relativistic observations made in $RF_{n,n=1,2,3...}$ on the size and heart rate of A_o can only be apparent, and therefore as false as the apparent daily rotation of the Sun around our planet Earth. This conclusion must be applied to any other physical object, including rulers and clocks, at rest in its proper inertial reference frame RF_o because special relativity should apply to all physical objects, whether biological or not. We can therefore write:

$$L_v = \gamma_v^{-1} L_o = L_o; \quad \text{and} \quad t_v = \gamma_v \left(t_o + \frac{L_o v^2}{c^2} \right) = t_o \tag{1}$$

Where L_o and t_o are any proper length and any proper time interval, respectively, measured in the proper reference frame R_o of the objects involved; and L_v and t_v their corresponding Lorentz's transformation values in other inertial reference frame from whose perspective RF_o moves at a uniform velocity v parallel to the measured length L_o . Evidently (1) only holds if $\gamma_v = 1$ and $v = 0$.

This means that the only valid measurements of length, space and time in inertial reference frames are those made in the **PROPER** inertial reference frame of the lengths, spaces and times being measured.

It must be concluded that special relativity is a theory about apparent realities and, therefore, about false realities. Consequently, it is a formally inconsistent theory if relativistic deformations of space and time are considered to be real deformations. And the reason for its inconsistency cannot be its first principle, which establishes the universality of physical laws, because if that principle were false, the consistent evolution of the universe, for which there is overwhelming empirical evidence, would be impossible. Therefore, the formal cause of the inconsistency of the special theory of relativity can only be its second fundamental principle, which establishes that the speed of light is always the same for all inertial reference frames, regardless of the speed of these reference frames with respect to the light source. The speed of light would always be the same, but **THROUGH THE ABSOLUTE REAL PHYSICAL SPACE [6]** in which it propagates.

Bibliographical References

- [1] M. Abraham. Prinzipien der Dynamik des Elektrons. *Ann. Phys.*, 315 (1):105–179, 1903.
- [2] Friederich Hasenöhr. Zur Theorie der Strahlung in bewegten Körpern. *Ann. Phys.*, 15, 344-370:344–370, 1904.
- [3] Friedrich Hasenöhr. Zur Theorie der Strahlung in bewegten Körpern. Berichtigung. *Ann. Phys.*, 16:589–592, 1905.
- [4] O. Heaviside. On the electromagnetic effects due to the motion of electrification through a dielectric. *Philos. Mag.*, 5, 27:324–339, 1889.
- [5] Max Jammer. *Concepts of Mass in Classical and Modern Physics*. Harvard University Press, Cambridge, MA, 1961.
- [6] A. León Sánchez. Gravitational waves as empirical proof of space reality. *The General Science Journal*, 2023. [PDF](#).
- [7] H. A. Lorentz. Electromagnetic phenomena in a system moving with any velocity smaller than that of light. *Proceedings of the Royal Netherlands Academy of Sciences and Arts*, 6:809–831, 1904.
- [8] J. J. Thomson. On the electric and magnetic effects produced by the motion of electrified bodies. *Philos. Mag.*, 5, 11:229–249, 1881.